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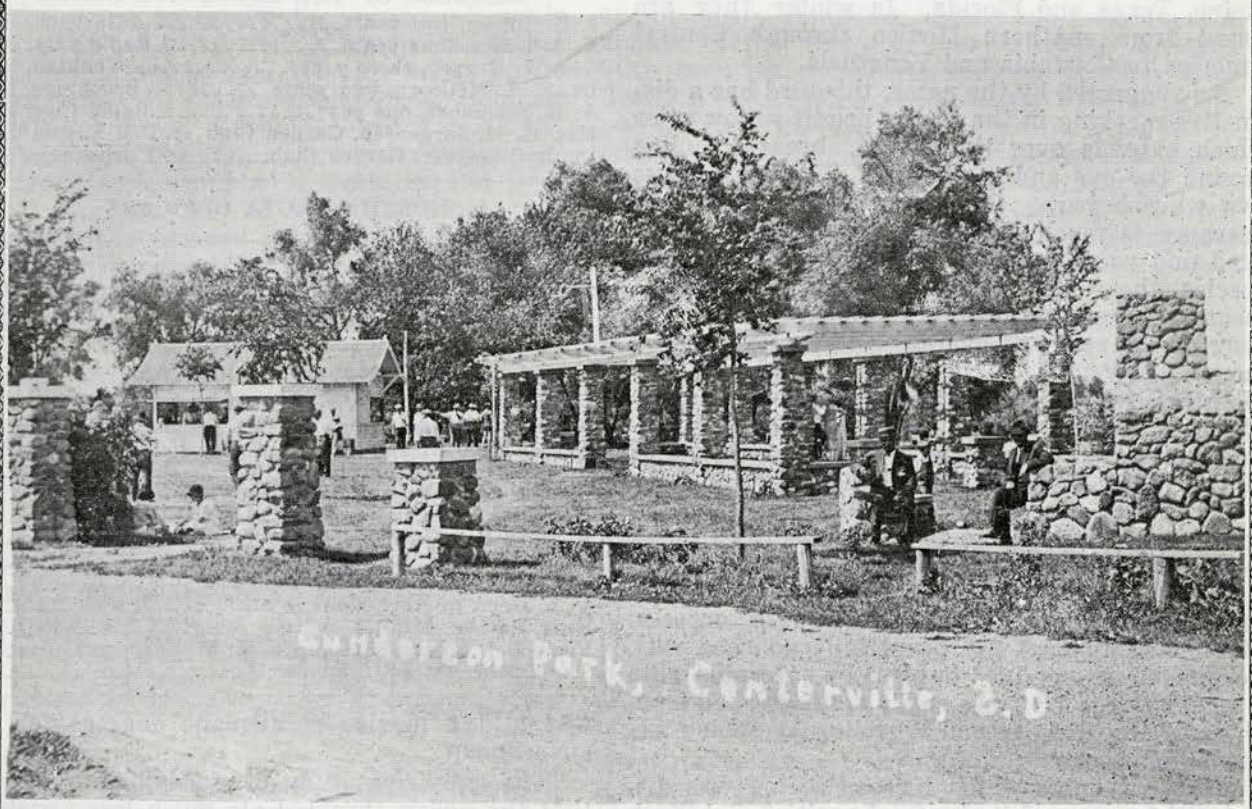
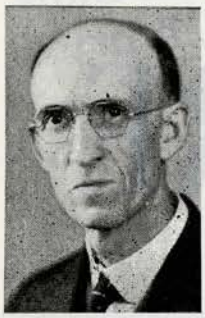


Scene in the Park at Centerville, S. D.

THE YELLOW-THROATED VIREO

By

O. A. Stevens



O. A. Stevens

My first impression of this bird was that it was a rather rare species in secluded woods. Later I found it was to be heard in my own neighborhood in the city, not abundant, not easily seen but a bird or two quite regularly. Dr. F. M. Chapman says it is "a dweller of tree tops * * * seldom comes below the upper story * * *. Dr. Roberts states that it is almost entirely absent from the evergreen forest in Minnesota but a common summer resident south and west of that region. The summer range of the species includes all of the eastern United States, from Saskatchewan to Maine, Texas and Florida. In winter they are found from southern Mexico through Central America to Colombia and Venezuela.

As suggested by the name, this bird has a distinctive marking in the rather bright yellow color which extends over the throat, breast, a line around the eye and to the bill. The wings have two whitish bars. Otherwise the general appearance is much the same as that of the red-eyed and warbling vireos. As with those two species, the song is distinctive and is the best means of finding the bird. It is much like the song of the red-eyed but has a lower pitch and a more mellow tone. Also it is delivered more deliberately with a considerable pause between the phrases. The bird has a sort of scolding "sucking" call which reminds me of one of the notes of the yellow-breasted chat.

The nests are said to be similar to those of the red-eye and placed 10 to 50 feet above the ground. Oliver Davie, in his "Nests and Eggs of North American Birds," rates them as the most artistic of the family, * * * strips of thin bark, grasses, etc. The outside * * * beautifully adorned with lichens, which are held in place by caterpills' silk. * * * The eggs * * * are easily distinguished from those of the Red-eye and Warbling by their roseate hue."

The only nest which I recall seeing was discovered because of its unusual position, a branch of an ash tree extending over a much used walk on the college campus and only about 15 feet above the ground. It had four young birds about a week old on June 30 and was photographed by a young camera enthusiast who at last reports was taking movies of airplane engines for the government.

The extensive study of food habits showed that the yellow-throated ate much less vegetable material than the other vireos, less than two per cent. Caterpillars made up 23 per cent of the total. Very few beneficial insects were eaten. It is evident that this species should receive a high rating among our bird friends.

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NEWSLANTS

By
Harry A. Graves

H. A. Graves

We are glad to present in this issue our new president, Ralph M. Smith. Mr. Smith is Associate Agronomist at the Dickinson substation. His hobbies are horticulture and painting. His work at the Dickinson station is with all cereals but his chief concern is wheat breeding. Other officers are Fred McKinnis of St. John and George Millen of Sheyenne, vice presidents; and yours truly, secretary; with Earl Shaw of Fargo as treasurer. Mr. Simmons has agreed to use Mr. Smith's picture in connection with **Newslants** this month and give the readers a rest from having to look at mine.

I hereby make my annual plea to seedsmen everywhere and especially those who sell seeds up "thisaway" to mend their ways and not to list seed of Kochia any more. Whether called by its scientific name of **Kochia trichophyla**, Summer Cypress, Belvedere, Burning Bush, it is all the same old weed. **The Home Garden** for September has a timely article on plants, **Beautiful But Dangerous.** Kochia may be beautiful when first planted but the escaped forms that you see on roadsides and almost everywhere you look are no longer beautiful. While speaking of plants that become weeds—yesterday while waiting for a bus downtown, I saw a lady with a beautiful bouquet of False Dragonhead, **Physostegia virginiana.** This is a most striking flower somewhat like **Penstemon unilateralis.** This plant is classified as a plant that may be well behaved but often isn't! The lady bore out this theory when she proudly said, "I got a couple of roots in the Twin Cities last year and now the plant covers this much ground," as she spread her arms wide suggesting a patch 2-3 feet in diameter. While we are grinding the axe, we may as well condemn with the rest Bouncing Bet, **Saponaria officinalis.** This plant is as persistent as a book agent. I have kept a patch of it hoed off for two seasons and every week or so a new plant rears its ugly head --even yet.

We have finally met and conquered the new Butternut squash. I reported last month that as far as we know not a seed of this variety grew from the several sources secured. However, it now appears that the few seeds received from Dr. Yeager were all wood. Dr. C. I. Nelson has a nice bunch of this new squash as has Don Ward-

R. W. Smith

well, the "Axel" familiar to all listeners of WDAY. "Axel,' by the way, is a loyal member of our society and gardens diligently. This Butternut is a pretty squash. The ones I have seen are uniform, and beautiful to behold, the flavor different from Buttercup but not necessarily better. I would gladly grow both or either in my garden. Butternut is a different species from Buttercup and the two do not cross in the field.

The Fall Victory Garden Shows at Fargo and Grand Forks were greatly improved this year by a display of 40 apple varieties from the orchard of R. L. Wodarz of Wyndmere, North Dakota. This table of fruit was one of the bright spots at both shows and especially tempting to the young boys.

Heavy rains have apparently confused many of our spring flowering shrubs and consequently unduly excited many of our citizens. Flowers have been noticed or reported on Persian lilac, Bridle Wreath spirea, Snowball and apples. A reporter from the local daily called me just before midnight not long ago to get an opinion as to what ailed an apple tree that was bearing ripe fruit and flowers at the same time. I will stick my neck out and say that this is secondary growth resulting from our tropical rainfall of August and early September.

Market gardeners in these parts are rolling their onion tops this year which is a good indication that there are some benefits derived from this practice. Two horticulturists whose opinions I regard highly say it will mature the onions up quicker but will never make a good onion out of a "thick-neck,' as so many people believe.

The September-October issue of **Du Pont's** Agricultural News Letter points out that soy beans are more subject to lightning injury than many other plants. Plant pathologists point out that dead and blackened areas 40 to 50 feet in diameter in fields of young soy beans are sometimes mistaken for the work of some mysterious root-rotting, parasitic disease when the damage is actually caused by a bolt of lightning. Certain weeds in the same affected area are injured much less severely. When the soy bean plants reach blooming stage or older the diameter of the killed area is much less.

Ten bushels of fruit have been picked from the original Red River crab tree on the plots of your North Dakota Agricultural Experiment Sta-

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GARDEN CLUB GLEANINGS

By
Juanita E. Jorgensen

Convention Highlights

Mrs. Jorgensen

Only three clubs in the South Dakota Federation of Garden Clubs were unable to send delegates to the first annual convention in session with the South Dakota Horticulture Society at Vermillion. Delegates were there from Rapid City, Highmore, Brookings, Dell Rapids, Flandreau, Sioux Falls, South Sioux Falls, Centerville, Vermillion and Yankton to listen to eminent garden club speakers and horticulturists from Arkansas, Kansas, Iowa and South Dakota, to discuss garden club problems, and to make personal contact with gardeners from all parts of the state. I hope these delegates were able to transmit to their home folks the gist of the lessons learned about treating plum "pockets," of the best method of applying fertilizers to plants, of the immense increase in hardiness of top-worked apple trees, and of the most efficient insect control devices. I hope they were able to give a summary of the many services available to clubs from the National Council as outlined by Mrs. Frost; an encouraging vision of leadership in Junior Garden Club work suggested by Mrs. Mills; an inspiring message of great accomplishment in the children's tree planting project as explained by Mrs. J. E. Dvorak of Sioux City; and last but not least, I hope they can convey a small part of the illimitable beauty of the Kodachrome movies taken and shown by Mrs. Walter Stadel. These alone were worth the trip to Vermillion. If all the new goals and ideals envisioned at the convention could be carried out each club would sponsor more work in conservation of wild life, school plantings, junior clubs, and inter-club relationships. We are sure the final results will be in increased membership in our organization and in increased service for the benefit of our state. We thank the Vermillion Garden Club and Mrs. E. T. Michels for the many arrangements made to entertain the visitors. Thanks to them, the meeting was a successful one, and we feel that the presence of delegates from hitherto unrepresented parts of the state proves the value of the Federation.

The progressive attitude of members of the Federation was revealed when delegates voted unanimously to ask for affiliation with the National Council of State Garden Clubs. Mrs. Frost and Mrs. Stadel made gracious acceptance of this request.

Growth made without work and worry, however, is not fully appreciated, so we must report the loss of one club from the Federation. We can only hope they soon fulfill their promise to rejoin us at a later date.

The Seal Contest with its five-year membership prize was won by Mr. Carl Heinson of the Sioux Falls Garden Club, with his design depicting several characteristics of the state, and will soon be made into a seal to distinguish letterheads and other literature of the Federation. Mr. Heinson was also the artist who made the beautiful gavel and record book which were given to officers of the Federation. These gifts were presented by Mr. H. J. Donaldson, president of the Horticulture Society, in recognition of the new Federation of Garden Clubs. The gavel presented to Mrs. E. T. Michels, the Federation's first president, was made of highly polished South Dakota sumac; while the mirror-like covers of the secretary's book were of walnut, and a sumac that had grown to huge proportions. Each was artistically inscribed with the names of the officers, and of the Horticultural Society as the donor, and will be passed on to succeeding officers. The Federation greatly appreciates the beauty and appropriateness as well as the generous thoughtfulness which prompted such a gift. Thank you.

Limitations of the original Constitution become more and more apparent as soon as we try to accomplish more work, so several changes were voted to carry on during the coming year. A treasurer, Mr. F. X. Wallner of the Sioux Falls Garden Club, was elected; a recording secretary, Mrs. Morris Harter of Highmore, was chosen; and a by-law was voted to provide for payment of the extra 5c dues to the National Council. This is as good a time as any to remind clubs that the dues are due at this time of year, too. Dues are payable immediately after the convention each year, and must be paid before December 1 to meet the National Council deadline. Send a total of 30c per capita to Secretary Simmons again this year, and he will see to it that the extra nickle is turned over to the National Council.

With the announcement that Mr. and Mrs. H. J. Donaldson and family are leaving the state, the Federation loses the influence of a staunch and resourceful friend who has worked long hours to make the Federation a successfully functioning organization. Two garden clubs in Sioux Falls will feel their loss too, for Mr. and Mrs. Donaldson were each president of a club. Oregon will gain in them the inspiring energy and enthusiasm for gardening and garden club work which we

lose; but we nonetheless hope all our good wishes for them come true in their new home.

Accomplishment

The Gleanings for this month's Garden Club Notes, like the real harvest of 1944, is heavy. Much must be left until next time, but I do want everyone to read this comprehensive report from the Centerville Garden club as prepared for the convention. Centerville has been unchallenged as the oldest group in the state, so if you know of any other club please let us know.

"The Centerville Garden Club was organized in 1924 and federated with the woman's Club the same year. The first big project of the Garden Club was Gunderson Park. This tract of land on the Vermillion river has natural resources, and with the landscaping and constant care of the Garden Club has developed into one of the beauty spots of South Dakota. The imposing stone pillars at the entrance, the massive stone fireplace, the grapevine-covered stone pergola, are the result of this group's hard and untiring work.

The second project was planting shrubs at the school house. They also distributed seeds to the school children.

The third project was landscaping and planting the boulevard on North Broadway. This extends for three blocks and is most attractive. They also landscaped and planted shrubs around the municipal building. Money for these projects was raised by white elephant sales, lunches and dinners. Their total expenditure is well over $1,500 to date."

The Birth of a Yearbook

With the children shooed into the play room, the newly-elected president met with the program committee of three ladies and one horticulturally-minded gentleman to make the new yearbooks. An escorting husband provided ash trays; the card table, burdened with seed catalogues, sample yearbooks, flower and gardening guides, and horticultural books of all kinds was brought out, and the stage was set.

"What vegetables shall we choose for each month?"

"Let's take them alphabetically—A, asparagus; B, beets; C, cauliflower; D, dill,' from the horticulturally-minded gentleman.

"But the alphabet has twenty-six letters and we need only twelve.'

"O. K. Let's pick out the ones we like."

"Which flower for January? Roses?"

"Oh, no! Roses in June," said the horticulturally-minded gentleman."

"Well, then, let's take the unusual ones instead."

Just then one member happened to recall a bit of fresh gossip and the heads leaned closer, but the agriculturally-minded gentleman rapped the table gently and we were back to landscaping the yard.

Now the hostess remembered an old feud. "Dare we put Mrs. A. with Mrs. B. or will they both drop out?"

"Maybe if we put Mrs. X. with Mrs. Y. we will get to see her new house.'

"I know Mrs. M. and Mrs. N. can't entertain until they move out the heater so there will be room for the members along with the new blond piano."

"Now what about the cover of this book. Shall it be a romantic garden gate, or a big Hubbard squash? Who's artistic?"

"I'll make the cover," insisted the horticulturally-minded gentleman."

"Oh, no, you won't," from the new president. "Your artistic ability is too much like your spelling—excruciating. Our high school boy guest has agreed to make the covers.'

Two of the ladies being typists, and the horti culturally-minded gentleman being an expert with the stapler, the year book was born. The party broke up after an enormous cake had disappeared and the coffee pot was drained. Then the foiled horticulturally-minded gentleman went grumbling to bed.

—Blanche Donaldson.

Sioux Falls, S. D.

President's Message

Dear Club Members:

The first annual meeting of the Federation was a huge success. Nineteen delegates were present from ten of the thirteen Federated Clubs. A most interesting program was enjoyed by all of the delegates present. Highlights of the program were talks by Mrs. E. Wesley Frost, president of the National Council of State Garden Clubs, and Mrs. Walter Stadel, vice president of the National Council of State Garden Clubs, Rocky Mountain Region. Talks by Mrs. W. S. Mills on Junior Garden Clubs and Dr. Herrick on the friendly relations between the State Federation of Garden Clubs in Iowa and the National Council were of added interest. At this point I would like to thank the Vermillion Garden Club for their splendid work in organizing the convention and for their most gracious hospitality.

The new constitution, prepared and presented by Dr. Christol, was discussed at length. It was finally decided to operate one more year under our old constitution and to appoint a committee of three to report on the revised constitution at our next annual meeting.

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GARDEN NOTES

By

W. E. H. Porter, Hansboro, N. D.

W. E. H. Porter

With October's pleasant days of warmth, tempered by increasing crispness, we realize that only summer's afterglow remains, and tho with planting of bulbs and seeds we prepare for spring's certain resurrection; here in N. D. winter's river of living death must first be crossed, but memory lingers over ensuing jottings. July 29th. The last three days of refreshing, bracing coolness ends with 88 in shade and with no compensating breeze; a merciless sun beats down from a cloudless sky. July 30th. A bountiful hay crop is saved without a drop of rain, which latter commences in late evening, continuing for most of week, light crop of raspberries begins to ripen. That dream of a plant collector—the finding of a new, gorgeous flower in your own spot of Eden, is seldom fulfilled. However, for once, I have drawn a prize from a packet of Pearce's Salmagundi, sown two years ago. It is a composite somewhat over 3 ft. tall, transplanted over a year ago in a neglected fence line and then forgotten; foliage banana-like leaves, downy and 12 inches long but the remarkable thing about it is the inflorescence topping a leafy stem, the involucre, like an inverted bell, green with purple overtone and shiny, studded with wedge-shaped brown brachts, like almond on a cake. This might indeed seem flower enough in itself, but the true composite flower expands like an oversize bull thistle 2½ inches in diameter, a deep yellow with honey fragrance; search how I will I cannot find it in Bailey, it is a much prized acquisition for N. Dak. In spite of our very wet summer none of the Baltic ivy has survived; ivy cannot be grown successfully in N. D., but quite otherwise with the spring-planted trees and shrubs. Rowan tree shot up to over 8 gt. Double red thorn 6½ ft. and beautiful as a flowering shrub in dense foliage of prunus pissardi rosea, a copper red beech of old England; the colored illustration in Wayside's book is not overdrawn. Weeds drive one to distraction—you pull the tall ones and feel quite self-righteous over a job well done but that is merely an opportunity that lurking purslane has been waiting for; within a week its creeping mats are everywhere. One quite welcomes such invasive plants as yellow and white bedstraws Galium vernum and aetonicum and ladybells with their spire-hung bells, they at least are beautiful and bedstraws fragrant also and can keep all intruders out. One of our best rock garden plants for late summer is the blue onion Allium cyaneum, a few inches high with grass-like foliage and large clustered blue globose heads, native of China, perfectly hardy in N. D. A spring sown seedling of buttercup R. bulbosus in flower, dark yellow. This is the meadow buttercup of England. I remember, when a schoolboy digging these small, hot, sweet bulbs and using them as filling with bread and butter sandwiches. The heavy fragrance of tall white mignionette pervades the garden, a biennial in more favored climes, but here a hardy annual that freely resows and can withstand heavy fall frosts. Aug. 11th. Refreshing after our spell of torrid heat with 90 in shade, is today's strong, cool wind with temp. drop to 63, with low cumulus clouds, sharply etched against clear blue sky, drifting from northwest, underneath the restful green of after grass and grain fields change to a ripening yellow. Aug. 14th. Pleasantly cool and cloudy, we commence barley harvest. From midsummer sowing of Pearce's Salmagundi comes another find, Linaria bipartika. Bailey lists it as an annual, for a toad flax the color is unique, a rhodamine purple. also the long curved spur and of same rich color is a two-year-old plant of bee balm, Monarda didyma, a variable many colored species blooming in late summer. Our own common prairie species fistulosa is rather characterless, being a sort of washed out lilac. This year's sowing of Salmagundi has so far yielded 4 Monarda. Like other members of mint family Monardas propagate freely by stolons. From same source another pretty out of ordinary Linaria brightens the garden, flowers are a ruddy tan with orange palate and straight spur, perhaps a var. of alpina, nestling in a thick mat of pinate foliage is a large dark red purple flower of Anemone pulsatilla, an Oregon importation of two years' standing from Borsch. Aug. 21st. Our first white frost, the heavy rime saved any damage by vegetation tho "red root" foliage slightly burned. Tho my fall mums with their fat buds promise a long fall season bloom, it rather looks as if it will be a race against time with Aster violetta, plant is about 3 ft. tall but at present has no visible flower buds. Aug. 25th. Our three white frosts brot up a veritable downpour of rain and a refreshing coolness. Golden glows, tiger lilies and asters are a glorious display while bedstraws (sea foam) known as Galium aetonicum and yellow verum (fragrant) the always cheerful yellow Anthemis kelwayi,

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BALANCE OF NATURE

By
H. R. Woodward

H. R. Woodward

There has been some discussion during the past few years on the subject "Balance of Nature.' It has been discussed very largely by representatives in government, particularly in the Department of the Interior with such men as Dr. John C. Meriam, president of the Carnegie Institution of Washington. The theory has introduced some new ideas in the matter of conservation—and in the matter of preservation of many types of existing flora and fauna.

Balance of nature in the main, means that you cannot conserve by picking out only the things men and governments want to preserve for posterity or even for present consumption. Earlier ideas on the subject expressed the thought that a disturbing of natural environment caused unnecessary development of certain species. Time after time mention has been made of the introduction of rabbits into Australia where there were none existing before. Of course, when introduced there was plenty of food and few enemies so naturally they increased beyond control. Later foxes were introduced and they too found so much food and so few enemies that they likewise increased beyond their ordinary manner without exercising too much control over the rabbits. In fact such a little insignificant thing as a flea has done more to control the rabbit population than any other one thing and it has done this through spread of a disease producing virus.

There is now another element being injected into this idea regarding "Balance of Power" and that is in due time nature will restore and adapt animals and plants to their environment. In a given region plants and animals left undisturbed for a long period of time will, in the course of that time, establish a balance. In other words, man introduced the disease Actinomycosis (lump jaw) with his cattle which subsequently killed nearly all the antelope because by nature they had never been subjected to this disease before. In due time if any antelope survived this disease they would have developed an immunity and would not be so susceptable, nor would their progeny.

There are several ways in which man has been accused of disturbing the "Balance of Nature" and his main implements have been the plough, the axe, and the gun. Nature rarely kills off all the native stock and it has been through man that such species as the passenger pigeon and the heath hen have become extinct. The English sparrow has found its place somewhat in the balance of nature but the European starling has not. It is too recent an introduction. Many of our introduced types of weeds such as creeping jenny and the dandelion are in the same category, and each year greater inroads are made by serious weed pests into agricultural areas. It may take a long time for an adjustment to come about, yet in due time we may expect it to materialize. When thinking of these introductions we think of the ring-necked pheasant that has been in our areas only since 1912. Naturally it is the cause of some concern to the farmer because it has not yet found its place in the balance of nature. In this respect it is advisable that we have long open seasons to keep it under control, particularly because it lives in a man made environment to a certain extent. In such a respect as this we can see that man has really encouraged certain forms of life by making conditions more favorable for them. We might worry about grasshoppers, but man has certainly provided both an abundance of food and much protection for this creature.

In any locality nature builds the environment out of thousands of humble living things. Clear out the dead branches and some kinds of birds and insects cannot stay there. With their departure other forms of life lose natural controls. The golden monument to the seagull in Temple Square in Salt Lake City, is a constant reminder that when the gull is gone, the cricket will return. Hence, the gull is a protected bird in Utah. Too much of one kind of life may develop, too little of another. The Carnegie Institution of Washington has made a study to prove this at Point Lobos Reserve in California. In 336 acres there were found to be 300 kinds of flowering plants and thousands of lesser organisms too small almost for detection. There were found to be 176 kinds of vertebrate animals, of these one-fourth depend upon bare tree trunks or dead limbs of trees for their subsistence.

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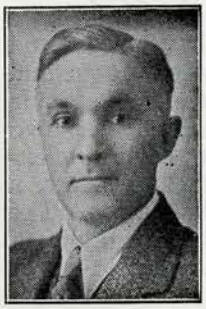
tion. This is a nice late fall or early winter crab. When fully ripe, the fruits are almost as red as Dolgo and of nice uniform shape. The flavor of the ripe fruits out of hand is delicious. Several young trees of this variety are in heavy annual bearing in other parts of the orchard.

The tobacco crop is said to be "inadequate." The question is, will there be enough alfalfa to keep up the supply of off-brand cigarets?

MANITOBA NEWS LETTER

By
W. R. Leslie



W. R. Leslie

Mid-September is the season for new activity in home gardens. Most crops have been harvested. There remain some roots, celery and cabbage to be tended. However, most thoughts turn towards the 1945 season. Food promises to remain relatively scarce, hence it is well to secure a goodly pile of rich, partially rotted barnyard manure to be worked into the vegetable garden soil in October. Where acid peat is available, it should benefit most prairie soils to augment the barn manure.

Rainfall has been copious. The Morden Station measured 7.22 inches in August. Weeds, where neglected, have flourished. It is important that these enemy plants which are laden with seeds, be pulled carefully in early morning while still damp with dew so that ripe seeds be not shaken out. The plants are removed to a pile and burned when dry. Industry is required if an enormous crop of seeds is to be avoided next summer.

September and early October is a favorable time to plant a number of popular perennial flowers. The last half of September is often better than later as considerable rooting may take place before cool soil brings pause to growth of plant cells.

Among the plants to be set out are peonies, lilies, tulips, squills, and many other plants which bloom in spring and early summer. Iris may still be transplanted even though plants set out a month ago have considerable advantage in being well rooted already. The moist condition of the garden earth makes this an auspicious autumn to furnish a new border or remake the old one. In early November mulch all these new transplants with strawy manure or clean straw to depth of 2 to 4 inches. In all cases be sure that only healthy vigorous plants are divided for increase

In the case of tulips, avoid using barnyard manure. Rotted manure may well have been added to the land for the previous crop. If the tulip soil is manured directly fungus diseases are probable. Darwin tulip bulbs are set 5 to 6 inches deep to give anchorage and to support the long stems. Planting deeper than 6 inches does not allow the sun drying of the bulb in mid-summer, which is so essential to continued health of the tulip bulbs. Early tulips do well with only 4 inches of soil covering.

Tomatoes have become increasingly important in prairie home gardens. Each summer inquiries come to the Morden Station concerning the dark rot that often develops on the outer end of the fruit. The trouble, known as blossom-end rot, is not caused by disease organisms but is a physical derangement that has arisen in response to unfavorable growing conditions. Some varieties are more prone to the malady than are others. Thin-skinned varieties, such as Bonny Best, are susceptible. Injury may be slight or it may involve a considerable portion of the fruit at its blossom end. The trouble usually occurs on green fruits when they are about half grown.

The explanation given by plant physiologists is that there is an internal competition for water among the stems, leaves and fruits of the succulent tomato plant. When soil moisture is plentiful water is available for all three. However, when water is scarce the leaves, possessing greater asmotic pressure than the fruits, exert a stronger pulling power for water and overcome their deficit by withdrawing misture from the growing fruits. This causes the cells in the end of the fruit to shrink, then collapse, and the tissues to harden and darken. If the skin cracks open, as is frequently the case during subsequent growth, disease organisms may enter and cause a general break-down of the fruit.

The key to the problem is to provide sufficient water for the roots, and yet not enough to encourage development of an over supply of large leaves which will transpire a great deal of water. A high concentration of nitrogenous fertilizer tends to induce such surplus large foliage. Furthermore, it also may predispose to drought by increasing the resistance to water absorption by the roots. Root injury may be expected to lessen water intake by the plant. A soil saturated with water is adverse as the rootlets require much oxygen to grow and to function.

To prevent blossom-end rot the gardener sets his tomato plants on a deeply worked friable soil that is well supplied with humus or organic matter. This will absorb much storage moisture and also make for aeration of the roots. The fertilizers applied will be such as to assure sufficient phosphorus and other vital plant foods but only a moderate amount of nitrogen. Our prairie loams usually have ample available potash present. Weeds which compete for soil moisture are given no quarter. Shallow cultivation is practised to prevent earth cracks which would permit water evaporating excessively. A mulch of straw or

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BLIZZARD BELT GARDEN NOTES

By
Mrs. G. M. Jorgensen

Notice! This is the new form of your Blizzard Belt Gardener. The original mimeographed inserts went only to members of the Garden Club Federation while this will reach everyone who receives North and South Dakota Horticulture, for, in the words of Secretary Simmons, "The regular members that pay much more for the magazine are certainly entitled to all the good things it is possible for us to put into it." We have changed the form but not the contents, so send in your contribution as usual. We want personal experience stories of your efforts in all lines of gardening in the so-called Blizzard Belt section of the United States and Canada. We want to know what that new plant is over there in the corner, how you wintered those handsome roses, whether or not you liked that highly touted iris, and what methods you used to keep marauding insects from your cucumbers. We are visitors to your garden, so tell us anything interesting about it.

Notice again! Do you like the name of Blizzard Belt? Now don't snow me under with protests against it! The name was chosen as a challenge to gardeners to show what can be grown in the north prairie region. The pioneers who settled here endured the freezing blasts of winter without the benefit of nature's sheltering trees and hedges; but they gradually found that the Master Gardener had simply forgotten to put trees here, and the fertile land was soon made beautiful with groves of magnificent trees, gardens, lawns and orchards. We are still learning to grow more and better plants and trees and shrubs; we are still learning to grow beauty where none grew before. The argument against the name is obvious—that it is bad advertising—that we do not want to scare people away with headlines about blizzards because thousands of folks in South Dakota have never seen a blizzard. South Dakota is the Sunshine State and it is natural for a state to put its best foot forward, but we want contributions from North Dakota as well as other states and provinces in the Blizzard Belt section. Let's have your vote on it. Send your "ayes" and "no's" to Dr. L. C. Snyder, State College, Brookings, South Dakota; but if you vote against the present name send in your suggestion for a better one.

Plan Now for Raspberries Next Year

Each year our raspberry crop is cut short by winter injury to the canes. This results not so much from the extreme cold as from the drying effect of our winter winds. To overcome this loss, commercial growers often lay the canes over and cover them with dirt. Special machines have been devised to do this.

In the home garden this work must be done by hand. If the plants have been properly thinned and kept in rows this operation need not take too much time. After the leaves have fallen and before the ground freezes bend the canes over and hold them down with croquet wickets or bent wide until dirt from between the rows can be spaded over the top of the canes. By using several wickets and proceeding from one end of the row, a small patch can be covered in a short time. The plants should be uncovered about the middle of April by loosening the soil with a potato fork or hook and pulling the canes up.

To check the effect of a winter cover, dirt was placed over one of two rows of Latham raspberries. These rows were started from plants from the same patch and appeared to be identical. The covered plants leaved out earlier and to the tips of the branches while the tips of the canes on the uncovered row showed considerable winter damage. The first fruit was ripe on the covered row nearly a week before that on the uncovered row. But, best of all, and this is really the important thing, the yield from the covered row was approximately five times as great on the covered row.

—Dr. L. C. Snyder.

Brookings, S. D.

Freezing of Foods Provides a Variety

Even cooked foods are now being processed in many farm freezers with great success, according to Dr. Frank A. Lee of the State Experiment Station at Geneva, New York. Baked beans, chili con carne, and mince meat are going into farm freezers, along with fruits, vegetables, eggs, meat, poultry, and dairy products; and even at this late season, one can find apples, broccoli, brussels sprouts, cauliflower and cranberries to put into the locker for future use.

—Agricultural Experiment Sta.

New York, N. Y.

Garden Magic

Only with Colchicums could you do it! When you realize that summer is almost gone and you did not get half the things planted which you had intended, you can satisfy that urge for a new gardening thrill by planting colchicums, in one or several varieties. On August 22 I tucked a dozen C. giganteum under a flap of lawn sod about three inches deep, and forgot all about them until September 11 when a visitor exclaimed, "Why, look at the Mayflowers blooming on your lawn!" There

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FRUIT BREEDING CONTRIBUTES TO BETTER LIVING

By

Dr. H. L. Lantz, Ames, Ia.

(Continued from Sept. issue)

Melba, an early variety, is fully hardy but not productive enough. Move the Minnesota seedling apples to central Iowa and none of them do as well as in Minnesota. Put them, notably Haralson, into northern Iowa and we find it doing well. Of course, there are notable exceptions to this rule For example, Delicious, originated in Iowa, does fairly well in southern Iowa, but when grown in Washington state and elsewhere it becomes the great leader of all apples in popularity. And so we must recognize that variety adaptation in the last analysis determines whether a new variety has a place in any given state or region.

Where do we now stand as fruit breeders and variety testers The contributions of fruit breeders are magnificent testimony as to the value of such work. Look, for example, at your plum variety lists—all or nearly all are contributions of the fruit breeder. The strawberry of today, all varieties are the product of breeding. New and superior gooseberries, currants, blueberries, raspberries are all due to the skill of the fruit breeder. In cherries, pears and apples, progress is less spectacular, but in apples, witness the successful introduction of Cortland (New York), Haralson, Beacon, Minjon (Minn.), Hawkeye, Edgewood, Sharon and Secor (Iowa), Dolgo, Goldo (S. Dak.). In peaches many new varieties have been introduced by the New Jersey, Michigan, Iowa and the U. S. D. A. Experiment Stations. Some of these like Halehaven, Golden Jubilee and others are forging ahead and have become important commercial varieties. That is sufficient, I think, to give you a broad picture of what has been accomplished.

At this point in the development of the art and science of breeding fruit, fruit breeders are getting their ideas focused on some new objectives, one of which is the development of disease resistance and of insect resistance in our fruits. And this does not seem to lie beyond the realm of actual achievement. Fire blight, the constant menance of the pear and of some varieties of the apple, is on the way out and the method will be by breeding. At the Tennessee Station, Dr. Brooks D. Drain has done a rather neat job of breeding pears for blight resistance and reports that seedlings with 1-4, 1-8 and 1-16 Chinese sand pear blood have shown considerable and marked resistance to pear blight. Similar work at the Oregon, Minnesota and Iowa Stations in breeding for blight resistance is under way.

Apple scab, a most costly disease in terms of fruit and foliage damage plus the cost of spray material and the labor of applying it, also appears to be on the way out, not today or tomorrow but perhaps within the next twenty-five, fifty or one hundred years. At the Iowa station seedling apple trees have often exhibited marked resistance to scab. For example, a cross of M. neid. x Jonathan has produced fruit which have been entirely immune to apple scab. The genes which control the scab resistance are in the apple. It is now a problem to recombine them in such a way as to secure the desired quality in the fruit. At Beltsville, Maryland, U. S. D. A. workers have isolated individual trees whose fruit is entirely immune from scab. Once the fruit breeder is able to ascertain where blight or scab resistance resides, it is then possible to recombine those plants or trees which transmit immunity to disease. In nearly all of the plants in the realm of our common fruits, the genes reside somewhere, perhaps in obscure varieties or in elementary species, which can be used to produce resistance to specific diseases. In vegetables there are many notable examples of disease resistance in the new varieties. Success here was due to the skill of the breeder in isolating and recombining in such a way as to produce disease resistance and desirable quality in the same plant—yellow resistant cabbage, wilt resistant watermelons and cucumbers. In the field of agronomy, rust resistant wheat and oats and hybrid high yielding corn have revolutionized that area of our farming economy during the past ten years.

Improved varieties in horticulture require a longer time to breed and to test than in farm crops, vegetables or flowers. But the characters of heritable variations in disease resistance and hardiness in fruits are the factors which will finally be the means of achieving better and more easily grown fruit.

Chemical methods of creating new varieties are being exploited. Dilute solutions of colchicine, an alkaloid derived from the wild Crocus, when used during the post germination period of the small seedling plant has certain properties of action which cause a doubling and quadrupling of the number of chronosomes in flowers, fruits and vegetables. Plants with greatly increased chronosome numbers often have greatly increased size in the flower, leaf and overall size of the plant.

Plant breeding in horticulture has made an

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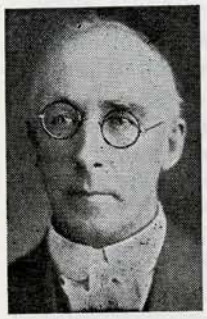
SECRETARY'S CORNER

By
W. A. Simmons



W. A. Simmons

Mr. Paul F. Elford, of Roscoe, writes as follows: "Enclosed find one rubel for one more year of good news for S. D. gardeners. We have had a very good year here for trees and gardens, altho we had very little fruit. I think the hard rain just at the time the fruit was blooming washed the pollen onto the ground, as we had no frost after the trees were in bloom. I have been experimenting some with super phosphate, which is old stuff to you experienced gardeners, and I have had very good results. I have also been raising four o'clocks from old roots instead of seed and I like it much better. The plants are earlier and stronger, and the blossoms are a much deeper color. I just dig up the old root, which is almost like a carrot, and put in it a box, cover with dirt and sprinkle once or twice during the winter just so they won't get too dry. The next spring they are ready to set out earlier than you plant seed. I want to try budding on some apple trees I have here. I would very much appreciate it if you could tell me where I can secure information on this. I made a mistake when I said one dollar as I have secured a new member for the other dollar. It is Mrs. Martin Scherf, Roscoe, S. D. She originally came from Canton, so was one of your neighbors. Her name was Valborg Johnson, a good Irish name I would say. I noticed Hi Beebe had his Philosophy in, this time again. I think he should take time out and write every time. I get a lot of help from the magazine so keep up the good work." Mr. Elford made another mistake, in our favor, by sending in another new member in a few days. And while on that subject, Mrs. W. F. Kellner sent in three new members. She said she was at a dinner and secured them at that event. We wish she could dine in such good company every day. Mr. Wallner has secured two new members and Pres. Dybvig one, all of which help a lot. Have been busy mailing out the reports the past few days and breathed a sigh of relief when they were all in the six mail sacks. We hope you will like them and deem them worthy of being saved for reference. Our rains keep coming and we have received over 30 inches of precipitation so far this year, with three months to go. We hope the weather bureau man will get it all out of his system before he starts dealing with snow. Our Thrush, Mr. Donaldson, gave us an exhibition of his lyrical ability at the banquet at Vermillion, singing several well known tunes to new words of his own choosing. For the benefit of those that were not there, here are his words:

Donaldson's Parodies

Tune: The Band Played On.

A FEAST

A strawberry grew on a plant near the ground and the bugs stood by,
The grasshoppers, beetles, the worms, grubs and weevils, knew that a feast was nigh.
The creepers and crawlers, they stood 'round about, awaiting the ripening fruit.
A robin flew down to this plant on the ground and the feast was on.

Tune of Clementine.

Oh the onions and the cabbage, Wallner could not make them pay,
Because the worms and beetles got them before he used the poison spray.
Storage charges ate the profits of the crop that would not pay,
He had to lower all his prices just to please the O. P. A.
"Gurney's Hardy" was a favorite and he ordered plants galore,
Other nurseries raised their prices, leaving George outside the door.
He refunded on the orders, on his desk were piled so high,
For he could not sell strawberries or the plants he could not buy.
The Anoka took a lacing, some swore 'twas good for naught,
Snyder countered with the opinion, 'twas the best that could be bought.
Dybvig howled, "We need more labor to dig out the trees and shrubs.
The rain came down and buried the tractor in Baltic mud, up to the hubs.
Jorgensen took mostly prizes at the show in '44,
The hail ruined her long bloomers, but she coaxed them out some more.
This convention has been merry, not a fight to linger o'er yet.
If you don't like this kind of music, tis the end, there'll be no more.

"How many people work in your packing shed?"
"With the boss, seven,"
"Six without the boss??"
"No, without the boss, none of them work"—Minnesota Fruit Grower.

MUCH DELAY IN SEARCH FOR BETTER PLANTS

After learning of some remarkable successes in breeding plants for resistance to certain diseases gardeners often wonder why plant breeders do not hurry and develop varieties of all crops resistant to all diseases. Few realize the odds against finding resistant individuals or closely related species that can be used in developing a new variety that is disease resistant and at the same time productive and of high quality. Sometimes the search for a resistant parent is promptly successful; sometimes it takes many years for success, and in most cases the search is still going on with no success in sight.

At the Plant Industry Station of the U. S. Department of Agriculture several years ago, plant breeders searched for four years and tested hundreds of varieties and types of tomatoes from all over the world. Then they found a particular strain of wild currant tomato that was immune to damage by wilt. It crossed readily with cultivated tomato, and the new Pan America variety was produced in only eight generations of backcrossing and selection.

Many more years have been spent in trying to find a form of lettuce that is resistant to aster yellows, a serious disease of lettuce. Out of hundreds of cultivated kinds none showed resistance, and out of more than a score of wild species (collected from all over the world) only a few showed any resistance. Unfortunately those few happened to be so distantly related that all efforts to hybridize them with lettuce were unsuccessful, and the wild forms alone are useless for salad. So the search has run into a stone wall. Some day a resistant kind may yet be found, but so far no one knows where in the world it may be.

An immediate search for a particular kind of parent may have to be abandoned for a time while the plant breeder turns to another task or search that promises success or is more urgent. But the old objective is kept in mind. The breeder is still on the alert for any possibly useful plant that might come to light anywhere, any time. If a yellows-resistant lettuce suitable as a parent exists anywhere, it is likely to be found, although maybe not for many years.

Kieffers Ripen at 60 Degrees

Kieffer pears have a peculiarity and are unlike many other varieties of pears. They ripen properly only at a temperature between 60 and 65 degrees Fahrenheit.

Growers have a rhymed rule about harvesting Kieffers. "Pick the whole crop when the first pears drop." At this stage the pears are hard, but if held for two or three weeks at 60 to 65 degrees F. they ripen gradually and are delicious to eat fresh and just right for canning. In areas where Kieffers grow, September and October temperatures range between 50 and 70 degrees and it is usually easy to arrange for ventilated storage.

Tests by horticulturists of the U. S. Department of Agriculture show that keeping Kieffers warmer—at 80 to 100 degrees—does not hasten ripening. The pears remain hard, tough, and poor-flavored when cooked. Stored below 50 degrees they do not soften and are not good when cooked.

If it is inconvenient to ripen and use Kieffers right after picking they can be stored at 32 degrees for two or three months and then ripened at 60 to 65 degrees. The cold storage seems to cut ripening time about one-fourth. Reversing the process will not work—that is, ripening first and then storing cold. Once softened they keep only briefly.

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were pale, leafless stems three inches high topped by delicate lavendar cups actually blooming less than three weeks after planting. You can plant them in September for next year, or put them in a sunny window for winter bloom, too.

—Juanita E. Jorgensen.

Dell Rapids, S. D.

BOOK REVIEW

By
Mrs. M. Harter, Highmore

Commercial Flower Forcing, by Alex Laurie, B. S., M. AM. and D.C. and D. C. Kiplinger, B.S., M.S. Published by the Blakiston Co., 1012 Walnut St., Philadelphia 5, Pa.

This book is an up-to-date revision of an edition that was first published in 1935, and it deals extensively with the newer phases of floriculture. In the chapter on gravel culture, one finds information about benches, plantings, formulas and flowers that succeed in gravel propagation. Other chapters deal with soil and fertilizers; propagation; control measures for diseases and insects; and almost complete revision of directions for cultural perfection of many crops. We recommend this book to all commercial flower growers as an excellent source of latest information, and we also believe amateur greenhouse owners will get some good ideas to assist them.

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grass clippings helps to conserve soil moisture in the period of high heat in mid-summer. A shelterbelt to protect against hot drying winds is very desirable. Throughout the season effort is bent towards maintaining conditions of optimum moisture in the garden soil.

Autumn choirs at the Morden Experimental Station include the treatment of storage cellars. Moulds, and other organism that lead to the rot of wood are controlled by disinfectants. Copper sulphate or formaldehyde are recommended for this purpose by Plant Pathologists at the Dominion Rust Research Laboratory. The copper sulphate solution is prepared by dissolving and mixing one pound of copper sulphate in 10 imperial gallons of water. Formaldehyde is used at the rate of 1 pint of commercial formaldehyde to 25 gallons of water. Treat the walls, ceiling, floor, shelves, bins and containers. When formaldehyde is used, close the cellar tightly for a period of from 4 to 6 hours. Then air the room thoroughly. Storage cellars should be thoroughly cleaned again and refuse destroyed early in the spring.

Weeds have enjoyed a great season in southern Manitoba. In spite of careful cultivation, there are sure to be a few strays in fence corners, by some shrubbery, or among the harbaceous perennials. Good labor economy will result from pulling such lurking stray plants in early mornings when they are pliable with dew. Place in a pile and burn with all the seeds when the plants dry out. A large proportion of the garden weed trouble arises from the neglected late weeds that ripened after summer cultivation ceased.

Late October is the time to prune bush fruits and grapevines. The prunings of vigorous young shoots of currants and gooseberries, and those of stout grape canes of this season's growth are bundled and taken to the cellar. There they are sliced into cuttings and stored in slightly damp sand and under cool temperatures until April.

Roses of tender nature are banked a foot high with cones of soil in early November. They are not pruned until late April. The hollows between the earth cones are filled with clean wheat straw and held in place with brush or wire. At the same season, a four-inch mulch of seedless straw is strewn over the perennial border, much of the rock garden, and over the strawberry patches. The straw beds on the flower borders are kept in place with brush.

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The majority of delegates present were in favor of our present alliance with the State Horticultural Society. It is your president s hope that this friendly alliance may continue with mutual benefit to both groups.

At a recent meeting of the executive council of the Federation it was decided to appoint two state chairmen, one on programs, and the other on conservation. It will be the duties of these chairmen to obtain materials from the National Council on these subjects and make these materials available to the local clubs. It is hoped that through the efforts of these chairmen that each club will be able to improve its program and that each club will start and complete at least one project on conservation.

—L. C. Snyder, President.

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white heavily scented mignonette and many colored Linarias prolong their summer bloom until laid low by winter's icy touch. Of the latter Salmagundi adds some new arresting colors and from same source is a star thistle which seems to be Centaurea Taurcheri, much like an understudy of the rather rank growing dealbata, a low rather untidy plant redeemed however by sparkling frosted foliage. But to classify all those intriguing things that show up from Rex Pearce's world wide collection of flowering plants is quite beyond me.

Life is made up, not of great sacrifices or duties, but of little things, in which smiles and kindnesses, and small obligations, given habitually, are what win and preserve the heart and secure comfort.—Sir Humphrey David.

FRUIT AND VEGETABLE NOTES

By

F. X. Wallner

F. X. Wallner

Aug. 21st. Today was a heavy day at our gardens, early morning rain, but we did pick acorn squash, peppers, tomatoes and other stuff for a 50-bushel order of mixed vegetables. Then about 10 a. m. a phone for 50 bushels of green peppers and a little later, a phone for 100 bags of onions. We have been at the topper all afternoon and will finish in the morning. Our early type of onion has been good, except there is a later mixture that makes them hard to top with machine. I am so sore today I can hardly walk or stoop to pick vegetables, because of taking part in the ball game yesterday at the South Sioux garden picnic. The pear and peach crop of the nation is more than double what it was last year. The apple crop is almost double, while the grape crop is a little less than last year, but Iowa will have a little more than a year ago. Iowa will have 10,000 bushels more sweet potatoes than last year, but as a whole, the nation will have about 10 million bushels less than a year ago. Iowa will have 40% less potatoes than last year, and the nation will have 55 million bushels less.

I am sorry to see Lawrence Elsinger neglect his orchard, but of course he has too much other important work to do. The bud wood we brot from Canada a few years ago is beginning to fruit and there are about four trees of four good varieties. One outstanding, and perhaps the best apple grown in the state today, must be the Cortland, or some other McIntosh seedling. Another is a good red apple, then there is a good early apple, much like Duchess, and a winter apple of good appearance. There is also one large sized Canadian crab of good quality. I would like to see more of the first grown, it is a good size, glossy dark red apple of fine quality and with the unmistakable McIntosh bouquet. Get more of this fruit onto those crabs, Lawrence. Harry Krueger, formerly of the Interstate Fruit Co., is also putting out an orchard in South Sioux Falls, down near the Yankton bridge, and all are red apples from the Minnesota station and I am watching this planting with much interest. Son Paul was astonished at the growth the trees and shrubs had made while he was away for three seasons, also remarked on the general improvement of grounds. Sept. 19th. Today another load of vegetables goes north consisting of 160 bushels of peppers and squash, the best Banquet squash we have ever raised, because some one sold us that seed insted of Buttercup. Potato crop prospects declined still more for August, and I think still more in September. The late rains have kept all from digging and unless there is a favorable time in most of October, some will not be dug. Onions that are still out on the ground will be badly affected with decay. The last activity for the Donaldsons was the planting of two evergreens in the plots of the South Sioux and the Sioux Falls garden plots at Falls park.

Here are a couple of releases from the U. S. Agri. Dept. that interested me, and I hope will you:

In commercial production of onion seed, according to scientists of the U. S. Dept. of Agriculture, the blowfly often plays an important part. Although honeybees visit onion blossoms, there are some important areas—the onion seed district of California, for one—where the blowfly is the principal pollenizer. When disturbed this insect may be seen to rise in clouds over blossoming onion fields.

Onion breeders at the Bureau of Plant Industry Station at Beltsville, Md., and at other research centers, commonly use this insect to obtain an abundant set of seed in their work on experimental crossings. The flies are enclosed in mosquito netting cages placed over the blossom heads to be crossed and the loose netting at the bottom is tied around the stalks.

Then with a life measured in days, the blowfly sacrifies this short span to science, for the flies put in onion cages usually die there, leaving a well seeded head to show that blowflies can be constructive as well as destructive.

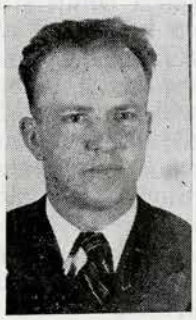
Systematic botany, says the U. S. Department of Agriculture, provides basic information for much of the scientific crop improvement work and for the investigation of untested wild plants. The milkweeds and the stinging nettle are good examples of wild plants now being studied with the help of botanists because they may be good crops. Milkweed floss is a good substitute for kapok which was imported from the East Indies. The nettle is considered a potential commercial source of chlorophyll, with possible valuable by-products.

First neighbor: "John, you should be more careful about pulling down your window shades. Last night I saw you kissing your wife."

John: "That's one on you, Bill: I wasn't home last night."—The Earthworm.

THE SUMACS AND ALLIED FORMS

By
Leon C. Snyder



Dr. L. C. Snyder

As a group the sumacs probably add more to the color of our autumn landscapes than any other similar group of plants. In general the sumacs are easy to propagate and grow and are very effective when used in masses for background or border plantings. Most species thrive in poor soil and several will tolerate considerable drought. The group is quite variable so it will be best to consider each species separately.

1. Smooth Sumac (Rhus glabra): This shrub is native in eastern South Dakota and in the Black Hills. The leaves are pinnately compound with a tropical appearance. In the fall they turn a brilliant red unless killed by a heavy frost. The fruiting panicles are scarlet and hang on throughout the winter. The size of this shrub will vary according to the soil and moisture conditions. On a gravelly knoll, it may not reach a height of over six feet, while on a fertile soil with abundant moisture it may reach a height of twenty or more feet. The suckering habit may be objectionable in a small yard as sprouts may come up all over the lawn at some distance from the main planting. It is best to use this shrub for mass effects in background plantings, especially in parks and lakeside plantings.

The variety "cismontana" is found in the Black Hills. The leaflets are fewer in number and a duller green than the species. A cut-leaf variety "laciniata" is also known. As tested here at Brookings the cut-leaf form was not as hardy as the species. This may have been due to the source of the material. It is always best to plant locally growing plants rather than plants shipped in from the south or east.

2. Staghorn Sumac (Rhus typhina). This is the largest of the sumacs, sometimes growing to a height of thirty feet. The large, blunt, branches are densely coated with thick hair thus suggesting the common name of "staghorn." The leaves are very long with numerous pinnate leaflets. The red fruits are borne in large conical clusters. These too are densely hairy. This species has about the same range and use as the smooth sumac.

The lovely cut-leaf variety is smaller and far more ornamental than the species.

3. Fragrant Sumac (Rhus aromatica). This low shrub is native in the eastern United States and is highly prized for shrub borders and foundation plantings. The leaves are trifoliate and fragrant when crushed. They remain green all summer and assume a tint of yellow, orange, and scarlet in the fall. The yellow flowers are born in short spikes and are definitely showy. These are followed by typical sumac fruits. Here at Brookings the tips of the branches winterkill slightly, but new growth quickly covers the dead tips in the spring.

. Skunkbush Sumac (Rhus trilobata). This is the western counterpart of the fragrant sumac. It is native on dry hillsides in the western part of the state and is perfectly hardy if native material is used. When grown from seed the shrub is quite variable, some plants being low and compact while others are quite upright. The shrub is very neat with bright green, trifoliate leaves that are seldom bothered by insects or disease. The shrub will tolerate considerable drought and makes a nice foundation shrub under windows on the south and west sides of the house. It is also very useful as a foreground shrub in the border.

I. Poison Ivy (Toxicodendron radicans). This trailing and troublesome plant belongs to the sumac family and many botanists even place it in the genus Rhus. The distinguishing characteristics are the large trifoliate leaves and the clusters of yellowish berries. The plant is quite variable, ranging from a low shrub to a tall, climbing vine. Many people are extremely sensitive to this plant and every effort should be made to exterminate it where it grows near picnic areas.

6. Common Smoketree (Cotinus coggyria). This lovely shrub has been introduced from southern Europe. The leaves are simple and very attractive and free from insect damage. The flowers are borne in loose panicles and covered with long silken hairs that give the bush the appearance of a cloud of smoke. The flowers are at first pink, later a dull purple.

(Continued from Page 155)

auspicious beginning. Such work is being pursued with great energy and imagination not only in the United States but in Russia, England, Germany and in many other countries. The Russians in particular have shown a tremendous amount of intelligent resourcefulness in this realm. The prodigious amount of work being done with horticultural plants is destined to put hardier, more disease resistant, higher quality varieties of many kinds into active cultivation to the great benefit of all mankind.